

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of sensitizing a sensing surface arranged to be passed by a liquid flow within a flow cell, comprising:

providing a laminar flow of a first sensitizing fluid and a laminar flow of a second fluid adjacent to the flow of the first sensitizing fluid such that the two laminar fluids flow together over the sensing surface with an interface to each other, at least said first sensitizing fluid being capable of sensitizing the sensing surface, and

adjusting the relative flow rates of first sensitizing fluid and second fluid to position the interface such that the first sensitizing fluid contacts a discrete sensing area of the sensing surface for selective sensitization thereof.

2. (Original) The method according to claim 1 wherein the second fluid does not interact with the sensing surface to thereby produce a sensitized area and a non-sensitized area on the sensing surface.

3. (Original) The method according to claim 1 wherein, in a further step, the first sensitizing fluid is replaced by a fluid that does not interact with the sensing surface, and the second fluid is replaced by a second sensitizing fluid that is capable of sensitizing the sensing surface differently than the first sensitizing fluid to produce two differently sensitized areas, optionally spaced apart by a non-sensitized area on the sensing surface.

4. (Original) The method according to claim 1 wherein the relative flow rates of the laminar flows are varied to displace the interface laterally and provide a gradient-sensitized area on the sensing surface.

5. (Original) The method according to claim 1 wherein the relative flow rates of the laminar flows are continuously varied to provide a continuous gradient-sensitized area on the sensing surface.

6. (Original) The method according to claim 1 wherein an additional laminar flow of a third fluid is provided on the other side of the flow of the first sensitizing fluid so that the laminar flow of the first sensitizing fluid is sandwiched between the laminar flows of the second and third fluids.

7. (Original) The method according to claim 6 wherein the second and third fluids are not capable of sensitizing the sensing surface.

8. (Original) The method according to claim 7 wherein the method is repeated with at least one different sensitizing first fluid and with varied relative flow rates of the second and third fluids to provide at least two adjacent sensitized surface areas on the sensing surface.

9. (Previously Presented) The method according to claim 1 wherein sensitization of the sensing surface comprises immobilizing an analyte-specific ligand to the sensing surface.

10. (Original) The method according to claim 9 wherein the analyte-specific ligand is selected from the group consisting of antigen, antibody, antibody fragment, oligonucleotide, carbohydrate, oligosaccharide, receptor, receptor fragment, phospholipid, protein, hormone, avidin, biotin, enzyme, enzyme substrate, enzyme inhibitor and organic synthetic compound.

11. (Original) The method according to claim 1 or 6 wherein the first sensitizing fluid sensitizes an area on the sensing surface, and a second sensitizing fluid is applied transversely to the direction of the first sensitizing fluid to yield an overlapping sensitized area on the sensing surface.

12. (Original) The method according to claim 11 wherein the first sensitizing fluid sensitizes an area on the sensing surface, and at least two different second sensitizing fluids are applied transversely to the direction of the first sensitizing fluid to yield at least two overlapping sensitized areas on the sensing surface.

13. (Original) The method according to claim 11 wherein at least two different first sensitizing fluid sensitized at least two parallel areas on the sensing surface, and at least two different second sensitizing fluids are applied transversely to the direction of the first sensitizing fluid to yield a matrix of overlapping sensitized areas on the sensing surface.

14. (Previously Presented) The method according to claim 11 wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is an analyte-specific ligand.

15. (Original) The method according to claim 14 wherein the analyte-specific ligand is selected from the group consisting of antigen, antibody, antibody fragment, oligonucleotide, carbohydrate, oligosaccharide, receptor, receptor fragment, phospholipid, protein, hormone, avidin, biotin, enzyme, enzyme substrate, enzyme inhibitor and organic synthetic compound.

16. (Previously Presented) The method according to claim 11 wherein at least the ligand of the first sensitizing fluid or the second sensitizing fluid is a bi-functional ligand.

17. (Previously Presented) A sensitized sensing surface made according to the method of claim 1.

18. (Previously Presented) A method of analyzing a fluid sample for an analyte, comprising sensitizing a discrete sensing area on a sensing surface by the method according to claim 1, contacting the sensing area with the fluid sample, and detecting interaction between the analyte and the sensing area.

19. (Original) The method according to claim 18 wherein at least one non-sensitized area on the sensing surface is used as a reference.

20. (Original) The method according to claim 18 wherein at least one sensitized area on the sensing surface is used as a reference.

21. (Original) A method of analyzing a fluid sample for an analyte, comprising:

providing a flow cell having a sensing surface associated therewith, wherein the sensing surface has at least two discrete sensing areas thereon; and

selectively contacting the fluid sample with at least one of the discrete sensing areas by passing the fluid sample through the flow cell under laminar flow conditions with a second fluid, wherein selective contact with the at least one discrete sensing area is controlled by adjusting the relative flow rates of the fluid sample and the second fluid.

22. (Original) The method according to claim 21 wherein the fluid sample passes through the flow cell under laminar flow conditions with the second fluid, and further with a third fluid located on the other side of the flow of the sample fluid so that the laminar flow of the sample fluid is sandwiched between the second and third flows.

23. (Original) The method according to claim 21 wherein the relative flow rates of the sample fluid and the second flow are adjusted to bring the sample fluid into contact with one of the at least two discrete sensing areas that was not previously in contact with the sample fluid.

24. (Original) The method according to claim 22 wherein the relative flow rates of the second and third flows are adjusted to bring the sample flow into contact with one of the at least two discrete sensing areas that was not previously in contact with the sample fluid.

25. (Original) The method according to claim 21 or 22 wherein one of the at least two discrete sensing areas is a sensitized sensing area.

26. (Original) The method according to claim 21 or 22 wherein one of the at least two discrete sensing areas is a sensitized reference area.

27. (Original) The method according to claim 21 or 22 wherein one of the at least two discrete sensing areas is a non-sensitized reference area.

28. (Original) The method according to claim 27 wherein the non-sensitized area was previously a sensitized sensing area.

29.-42. (Cancelled)

43. (Previously Presented) A method of synthesizing compounds, comprising sensitizing a discrete sensing area on a sensing surface by the method according to claim 1, wherein such sensitization constitutes the successive addition of chemical moieties to achieve compound synthesis.

44. (Previously Presented) A method of synthesizing peptides or oligonucleotides, comprising sensitizing a discrete sensing area on a sensing surface by the method according to claim 1, wherein such sensitization constitutes the successive addition of peptidic or oligonucleotidic moieties to achieve peptide or oligonucleotide synthesis.
